Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

July 11, 2011

Mr. Kelly Madalinski
Port of Portland
7200 NE Airport Way
Portland, Oregon 97218

Re: Storm Water Sampling Results — Operable Unit 3
Swan Island Upland Facility
Portland, Oregon
ECSI No. 271
1115-08

Dear Mr. Madalinski:

This letter represents the results of the storm water sampling conducted at Operable Unit 3 (OU3) at the Swan Island Upland Facility (SIUF; the Facility) located in Portland, Oregon (Figure 1). A Storm Water Source Control Evaluation (SWSCE) was submitted in March 2010. The DEQ provided comments on the SWSCE in a letter dated September 21, 2010. In a letter dated November 4, 2010, the Port agreed to complete the following activities:

1. Conduct three rounds of confirmational storm water sampling for polychlorinated biphenyl (PCB) aroclors from inlet WR-030 (where Aroclor 1260 was detected in two of the four samples historically collected). The sampling will be conducted to confirm the historical surface pavement cleaning and current BMPs are sufficient.
2. Confirm that the City of Portland was notified that the catch basin located in the warehouse was disconnected from the sanitary sewer and that it was completed in accordance with City requirements.

This letter presents the methods, procedures, and results of the chemical analyses for the above activities.

SAMPLING ACTIVITIES

Preparatory Activities

The following activities were completed in preparation for the field work.

- Health and Safety Plan (HASP). Ash Creek Associates (Ash Creek) prepared a HASP for its personnel involved with the project.
- Work in Tenant Areas. The work activities were conducted in coordination with tenant schedules.

Storm Water Sampling

The sampling activities were completed consistent with the methods and procedures presented in the SWSCE.

3015 SW First Avenue
Portland, Oregon 97201-4707
(503) 924-4704 Portland
(360) 567-3977 Vancouver
(503) 943-6357 Fax
www.ashcreekassociates.com

Sampling Event Criteria

The following storm event criteria were developed and presented in the Storm Water Evaluation Work Plan (Ash Creek, 2008). The criteria were generally consistent with the Storm Event Criteria and Selection described in the JSCS guidance document (DEQ/EPA, 2005). The storm event criteria are as follows:

1) Each sampling event is preceded by an antecedent dry period of at least 24 hours (as defined by less than 0.1 inch of precipitation over the previous 24 hours);
2) Minimum predicted rainfall volume of greater than 0.2 inch per event; and
3) Expected storm event duration of at least 3 hours.

A rain gauge at the Swan Island Pump Station (approximately 1,500 feet from the Facility; maintained by the City of Portland Hydra Network) was used to confirm that the sampling criteria were met. The rain gauge lists the rainfall depth per hour (reported on a one- to three-hour time delay). The rain gauge data are found at the following internet address: http://or.water.usgs.gov/non-usgs/bes/swan_island_pump.rain

Storm Water Sampling Procedures

Whole-water grab samples were obtained from inlet WR-030 in accordance with Standard Operating Procedure (SOP) 2.12 (Attachment A). The outlet at the bottom of the storm water inlet is connected to a 10-inch corrugated metal pipe that discharges to the Lagoon. The metal outfall pipes are located on a steep riverbank and the outlets are commonly submerged, except during low-water months.

A decontaminated stainless steel storm water sampling pan was constructed to allow for sample collection. The sampling pan was deployed after removing the grated inlet cover. Samples were collected with a disposable polyethylene bottle and transferred into large, pre-cleaned bulk sample containers. The laboratory split the samples into the required volumes for analysis, filtering where applicable.

Storm Events

The storm water sampling events are described below.

February 12, 2011 Storm Event. Ash Creek Associates, Inc. (Ash Creek) personnel mobilized to OU3 in the afternoon of February 12, 2011. A storm of greater than 0.2 inch was predicted. Light rain was occurring upon arrival and the pavement was only partially wet. The collector was deployed at 5:10 pm and Ash Creek personnel returned at 7:00 pm to collect the sample. The storm had a duration of 9 hours and measured 0.55 inch of rainfall. A hydrograph is presented in Attachment B. The 24-hour period prior to the sampling event met the criteria for the "antecedent dry period".

April 27, 2011 Storm Event. Ash Creek personnel mobilized to OU3 in the evening of April 27, 2011. A storm of greater than 0.2 inch was predicted. Storm water runoff was occurring upon arrival and the sample was collected. The storm had a duration of 5 hours and measured 0.19 inch of rainfall. A hydrograph is presented in Attachment B. The 24-hour period prior to the sampling event met the criteria for the "antecedent dry period".

May 11, 2011 Storm Event. Ash Creek personnel mobilized to OU3 in the afternoon of May 11, 2011 and deployed the storm water sampler in inlet WR-030. A storm of greater than 0.2 inch was predicted. Light rain was occurring upon arrival of Ash Creek Personnel at 2:15 pm, however, no runoff was flowing into the inlet; Ash Creek remained on site for runoff to begin flowing into the collector. Storm water runoff began to fill the collector at 4:10 pm and the sample was collected. The storm had a duration of 5 hours and measured 0.27 inch of rainfall. A hydrograph is presented in Attachment B. The 24-hour period prior to the sampling event met the criteria for the "antecedent dry period".

LABORATORY ANALYSIS

The samples collected from the above activities were submitted to TestAmerica, Inc. in Beaverton, Oregon for chemical analysis. Copies of the laboratory reports are included in Attachment C (in CD-Rom format due to the length of the Level III deliverable report). The samples were analyzed on a standard turnaround time (up to 10 business days).

The storm water samples were analyzed for some or all of the following analyses:

- PCBs as Aroclors by EPA Method 8082;
- TSS per AHPA/EPA Methods.

Method reporting limits (MRLs) consistent with those presented in the SWSCE were requested from the analytical laboratory.

ANALYTICAL RESULTS AND DATA QUALITY REVIEW

Table 1 presents the analytical data from the three storm water sampling events together with historical sample results. A summary of the analytical data is below.

- PCBs. PCBs were not detected above the MRLs in any of the samples collected from WR-030.
- TSS. The concentration of TSS was non-detect (<10,000 µg/L) in the sample from the first event, estimated (J-flagged) as 5,000 ug/L in the sample from the second event, and 73,000 µg/L in the sample from the third event.

A quality assurance review of the data was completed. Aroclor 1260 was detected just above the MDL in the method blank sample associated with April 27, 2011 sample. The laboratory indicated that this detection was due to "1260 contamination during cleanup procedure" and that since the results for the primary sample are non-detect, the data are not impacted. No other qualifiers were attached to the data as a result of our review.

ABANDONMENT OF WAREHOUSE CATCH BASIN

A catch basin is present in the warehouse area (Figure 3). The catch basin was constructed with the building in 1980. It was connected to the sanitary sewer via an oil/water separator (OWS). The original building tenant reportedly filled the OWS with concrete prior to 1990 to prevent accidental discharge of petroleum or vehicle maintenance fluids to the sanitary sewer (Hahn, 2002). Since then, the catch basin has served as a blind sump.

The DEQ requested that the Port confirm that the OWS was disconnected in accordance with City of Portland (City) requirements. Ash Creek contacted the Permit Information Office at the City's Bureau of Development Services to request information. The City directed Ash Creek to Portland Maps (portlandmaps.com) to determine if historical records were available for this work. Ash Creek located a Bureau of Buildings Report of Plumbing Inspection for a "cap waste line from oil sep. to sw." dated August 24, 1992 (Attachment D). No additional information was readily available; however, we believe that the inspection confirms that the City was notified that the OWS was disconnected and that the work was completed in accordance with City requirements.

CONCLUSIONS

Based on the evaluation of the available data, storm water does not represent a current source of contamination to the Lagoon. No further action is recommended.

If you have any questions regarding these activities, please contact the undersigned at (503) 924-4704.

Sincerely,

Michael J. Pickering, R.G.
Associate Hydrogeologist

REFERENCES

Ash Creek, 2008. Storm Water Evaluation Work Plan, Operable Unit 3, Swan Island Upland Facility. Prepared for the Port of Portland, October 20, 2008.

Ash Creek, 2010. Storm Water Source Control Evaluation, Operable Unit 3, Swan Island Upland Facility. Prepared for the Port of Portland, March 10, 2010.

DEQ/EPA, 2005. Portland Harbor Joint Source Control Strategy – Final (Table 3-1 Updated July 16, 2007). December 2005.

Hahn, 2002. Phase I Environmental Site Assessment, Former Foss Environmental Facility, 5420 N. Lagoon Avenue, Portland, Oregon. April 19, 2002.

ATTACHMENTS

Table 1 – Storm water Analytical Results

Figure 1 – Facility Location Map
Figure 2 – Site Vicinity Map
Figure 3 – Facility Plan

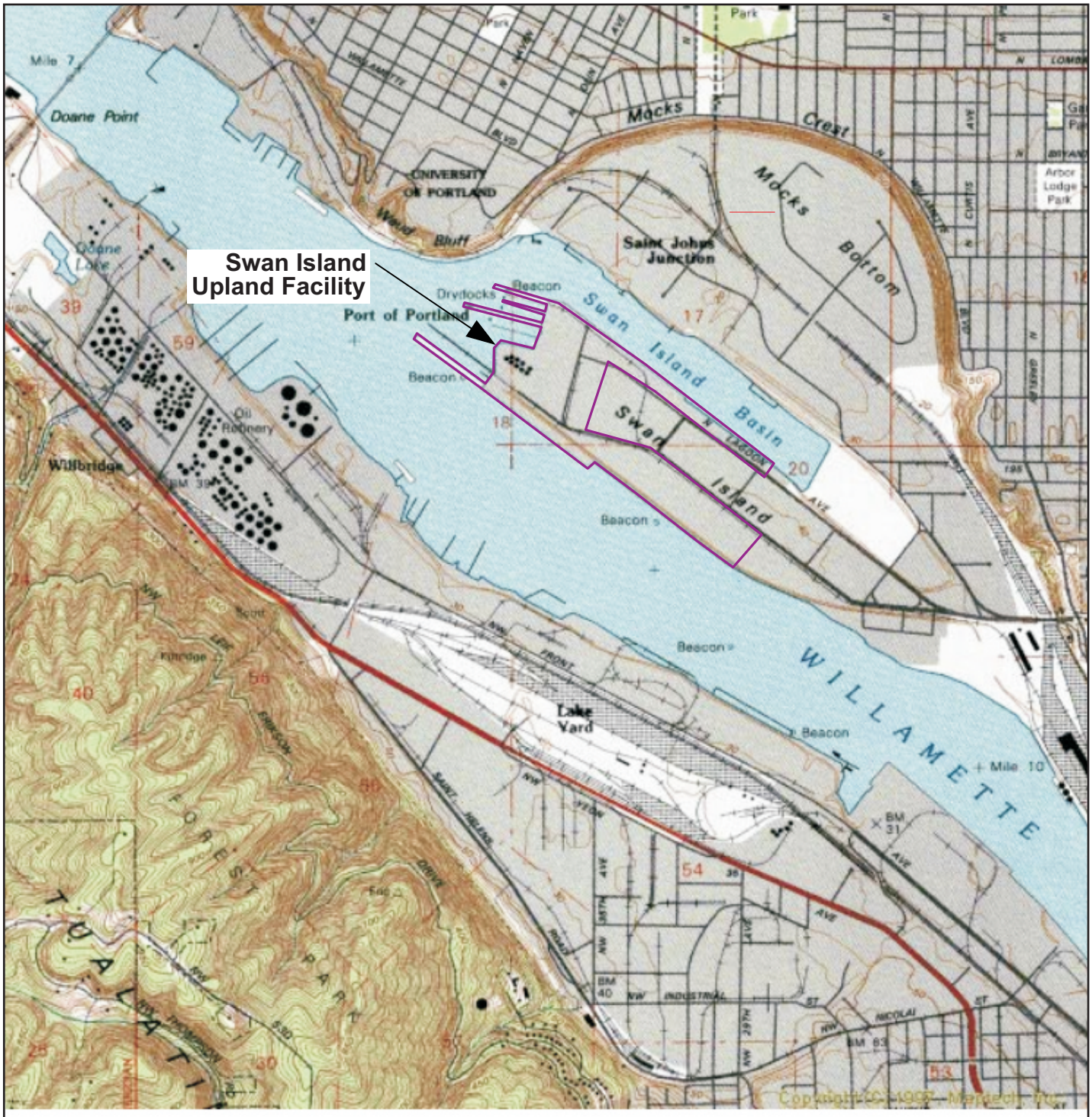
Attachment A – Standard Operating Procedures 2.12
Attachment B – Storm Water Hydrographs
Attachment C – Laboratory Analytical Report (CD-Rom)
Attachment D – Catch Basin Inspection Report

Table 1 - Chemical Analytical Results: Storm Water
SIUF - OU3
Portland, Oregon

	SLV for Portland Harbor[2]	WR-030								WR-032			WR-034				
		2/23/2009	3/14/2009		4/12/2009	4/28/2009	2/12/2011	4/27/2011	5/11/2011	2/23/2009	3/14/2009		2/23/2009	3/14/2009		4/12/2009	4/28/2009
		Total	Total	Dissolved	Total	Total	Total	Total	Total	Total	Total	Dissolved	Total	Total	Dissolved	Total	Total
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Total Suspended Solids	--	140,000	20,000	--	10,000	10,000	<10,000	5,000 J	73,000	50,000	20,000	--	20,000	<10,000	--	<10,000	<10,000
Metals/Inorganics																	
Aluminum (pH 6.5 - 9.0)	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Antimony	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	0.045	1.41	<1.00	<1.00	<1.00	<1.00	--	--	--	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Arsenic III	190	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	0.094	0.544	<0.500	<0.500	<0.500	<0.500	--	--	--	<0.500	<0.500	<0.500	1.23	<0.500	<0.500	<0.500	<0.500
Chromium, total	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, hexavalent	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	2.7	59.7	13.5	10.6	13.1	14.1	--	--	--	23.3	17.8	13.7	33.6	6.96	6.25	12.7	16.4
Lead	0.54	75.3	3.88	<1.00	8.13	1.87	--	--	--	10.4	2.13	<1.00	9.35	<1.00	<1.00	2.6	1.46
Manganese	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	0.77	<0.200	<0.200	<0.200	<0.200	<0.200	--	--	--	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Methyl Mercury	0.0028	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	36	228	124	109	236	138	--	--	--	134	84.4	82.2	498	78.0	83.2	101	134
Perchlorate	<24.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyanide	5.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyltins																	
Monobutyltin	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyltin	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tributyltin	0.072	<0.0020	<0.0019	--	<0.0019	<0.0019	--	--	--	<0.0020	<0.0019	--	<0.0019	<0.0019	--	<0.0019	<0.0019
Tetrabutyltin	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCBs Aroclors																	
Aroclor 1016	0.96	<0.0472	<0.0481	--	<0.0476	<0.0526	<0.0476	<0.0476	<0.0500	<0.0478	<0.0476	--	<0.0500	<0.0481	--	<0.0476	<0.0526
Aroclor 1221	0.034	<0.0943	<0.0962	--	<0.0952	<0.105	<0.0952	<0.0952	<0.100	<0.0957	<0.0952	--	<0.100	<0.0962	--	<0.0952	<0.105
Aroclor 1232	0.034	<0.0472	<0.0481	--	<0.0476	<0.0526	<0.0476	<0.0476	<0.0500	<0.0478	<0.0476	--	<0.0500	<0.0481	--	<0.0476	<0.0526
Aroclor 1242	0.034	<0.0472	<0.0481	--	<0.0476	<0.0526	<0.0476	<0.0476	<0.0500	<0.0478	<0.0476	--	<0.0500	<0.0481	--	<0.0476	<0.0526
Aroclor 1248	0.034	<0.0472	<0.0481	--	<0.0476	<0.0526	<0.0476	<0.0476	<0.0500	<0.0478	<0.0476	--	<0.0500	<0.0481	--	<0.0476	<0.0526
Aroclor 1254	0.033	<0.0472	<0.0481	--	<0.0476	<0.0526	<0.0476	<0.0476	<0.0500	<0.0478	<0.0476	--	<0.0500	<0.0481	--	<0.0476	<0.0526
Aroclor 1260	0.034	0.429	<0.0481	--	0.197	<0.0526	<0.0476	<0.0476	<0.0500	<0.0478	<0.0476	--	<0.0500	<0.0481	--	<0.0476	<0.0526
Aroclor 1262	--	<0.0472	<0.0481	--	<0.0476	<0.0526	<0.0476	<0.0476	<0.0500	<0.0478	<0.0476	--	<0.0500	<0.0481	--	<0.0476	<0.0526
Aroclor 1268	--	<0.0472	<0.0481	--	<0.0476	<0.0526	<0.0476	<0.0476	<0.0500	<0.0478	<0.0476	--	<0.0500	<0.0481	--	<0.0476	<0.0526
Phthalate Esters																	
Dimethylphthalate	3	<0.962	<0.952	--	<0.952	<0.990	--	--	--	<0.971	<0.962	--	<0.990	<0.952	--	<0.952	<1.0
Diethylphthalate	3	<0.962	<0.952	--	<0.952	<0.990	--	--	--	<0.971	<0.962	--	<0.990	<0.952	--	<0.952	<1.0
Di-n-butylphthalate	3	<0.962	<0.952	--	<0.952	<0.990	--	--	--	<0.971	<0.962	--	<0.990	<0.952	--	<0.952	<1.0
Butylbenzylphthalate	3	<0.962	<0.952	--	<0.952	<0.990	--	--	--	<0.971	<0.962	--	<0.990	<0.952	--	<0.952	<1.0
Di-n-octylphthalate	3	<0.962	<0.952	--	<0.952	<0.990	--	--	--	<0.971	<0.962	--	<0.990	<0.952	--	<0.952	<1.0
bis(2-Ethylhexyl)phthalate	2.2	1.52	<0.952	--	<0.952	<0.990	--	--	--	1.99	1.22	--	5.67	<0.952	--	<0.952	<1.0
PAHs																	
Naphthalene	0.2	<0.0959	<0.0952	--	<0.0952	<0.0990	--	--	--	<0.0952	<0.0962	--	<0.100	<0.0952	--	<0.0952	<0.1
2-Methylnaphthalene	0.2	<0.0959	<0.0952	--	<0.0952	<0.0990	--	--	--	<0.0952	<0.0962	--	<0.100	<0.0952	--	<0.0952	<0.1
Acenaphthylene	0.2	<0.0959	<0.0952	--	<0.0952	<0.0990	--	--	--	<0.0952	<0.0962	--	<0.100	<0.0952	--	<0.0952	<0.1
Acenaphthene	0.2	<0.0959	<0.0952	--	<0.0952	<0.0990	--	--	--	<0.0952	<0.0962	--	<0.100	<0.0952	--	<0.0952	<0.1
Fluorene	0.2	<0.0959	<0.0952	--	<0.0952	<0.0990	--	--	--	<0.0952	<0.0962	--	<0.100	<0.0952	--	<0.0952	<0.1
Phenanthrene	0.2	<0.0959	<0.0952	--	<0.0952	<0.0990	--	--	--	<0.0952	<0.0962	--	<0.100	<0.0952	--	<0.0952	<0.1
Anthracene	0.2	<0.0959	<0.0952	--	<0.0952	<0.0990	--	--	--	<0.0952	<0.0962	--	<0.100	<0.0952	--	<0.0952	<0.1
Fluoranthene	0.2	<0.0959	<0.0952	--	<0.0952	<0.0990	--	--	--	<0.0952	<0.0962	--	<0.100	<0.0952	--	<0.0952	<0.1
Pyrene	0.2	<0.0959	<0.0952	--	<0.0952	<0.0990	--	--	--	<0.0952	<0.0962	--	<0.100	<0.0952	--	<0.0952	<0.1
Benzo(a)anthracene	0.018	0.0118	<0.00476	--	<0.00476	<0.00495	--	--	--	0.0057	<0.00481	--	0.00884	<0.00476	--	<0.00476	<0.005
Chrysene	0.018	0.0297	<0.00476	--	0.00631	<0.00495	--	--	--	0.0181	0.00985	--	0.0442	<0.00476	--	0.0076	0.00632
Benzo(b)fluoranthene	0.018	0.0209	<0.00476	--	<0.00476	<0.00495	--	--	--	0.00871	0.00959	--	<0.0200	<0.00476	--	<0.00476	<0.005
Benzo(k)fluoranthene	0.018	0.0128	<0.00476	--	<0.00476	<0.00495	--	--	--	0.00656	0.00624	--	<0.0150	<0.00476	--	<0.00476	<0.005
Benzo(a)pyrene	0.018	0.0134	<0.00476	--	<0.00476	<0.00495	--	--	--	0.00524	<0.00481	--	<0.0100	<0.00476	--	<0.00476	<0.005
Indeno(1,2,3-cd)pyrene	0.018	0.0119	<0.00476	--	<0.00476	<0.00495	--	--	--	0.00512	0.00622	--	0.00852	<0.00476	--	<0.00476	<0.005
Dibenz(a,h)anthracene	0.018	<0.0048	<0.00476	--	<0.00476	<0.00495	--	--	--	<0.004476	<0.00481	--	<0.00500	<0.00476	--	<0.00476	<0.005
Benzo(g,h,i)perylene	0.2	<0.0959	<0.0952	--	<0.0952	<0.0990	--	--	--	<0.0952	<0.0962	--	<0.100	<0.0952	--	<0.0952	<0.1
Other Analytes																	
TPH Diesel	--	<240	<245	--	<240	<263	--	--	--	<240	<240	--	241	<243	--	<245	<243
TPH Heavy Oil	--	<481	<490	--	<481	<526	--	--	--	<481	<481	--	648	<485	--	<490	<485
TPH-Gx	--	<80	<80	--	<80	<80	--	--	--	<160	<80	--	<1,600	<80	--	<80	<80
Total Organic Carbon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1. At Portland Harbor sites, drinking water MCLs and PRGs are also used as screening levels, per the JSCS. These values are applied when they are lower than all other screening values.
2. The source of each SLV is documented in Table 3.1 of the Portland Harbor Joint Source Control Strategy, which can be viewed at http://www.deq.state.or.us/lq/cu/nwr/PortlandHarbor/docs/JSCSFinalTable03_1.pdf
3. **Bold** = Detected above the method reporting limit (MRL).
4. < = Not detected above the method det
5. -- = Not analyzed or not available.
6. Shading indicates a detection that exceeds the screening criteria.
7. µg/L = Micrograms per liter.
8. PCBs = Polychlorinated biphenyls.
9. PAHs = Polycyclic aromatic hydrocarbons.
10. TPH = Total petroleum hydrocarbons.
11. J = Estimated.



Base map prepared from USGS 7.5-minute quadrangles as provided by Topozone. (1990)

0 2,000 4,000

Approximate Scale in Feet

Facility Location Map

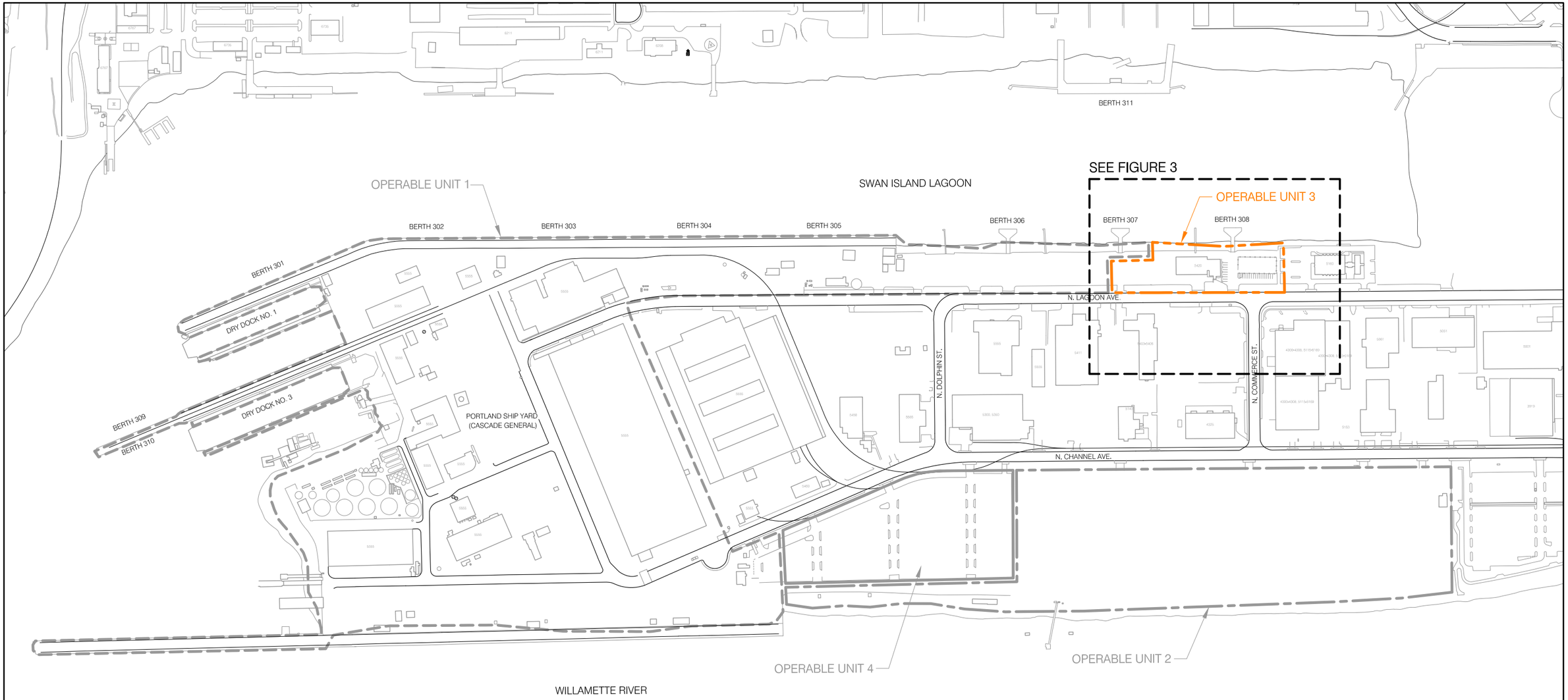
Ou3 Storm Water Sampling
Swan Island Upland Facility
Portland, Oregon

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Project Number 1115-08

July 2011

Figure 1



N

0 400 800

Scale in Feet

Legend:

- Operable Unit 1 Boundary
- Operable Unit 2 Boundary
- Operable Unit 3 Boundary
- Operable Unit 4 Boundary

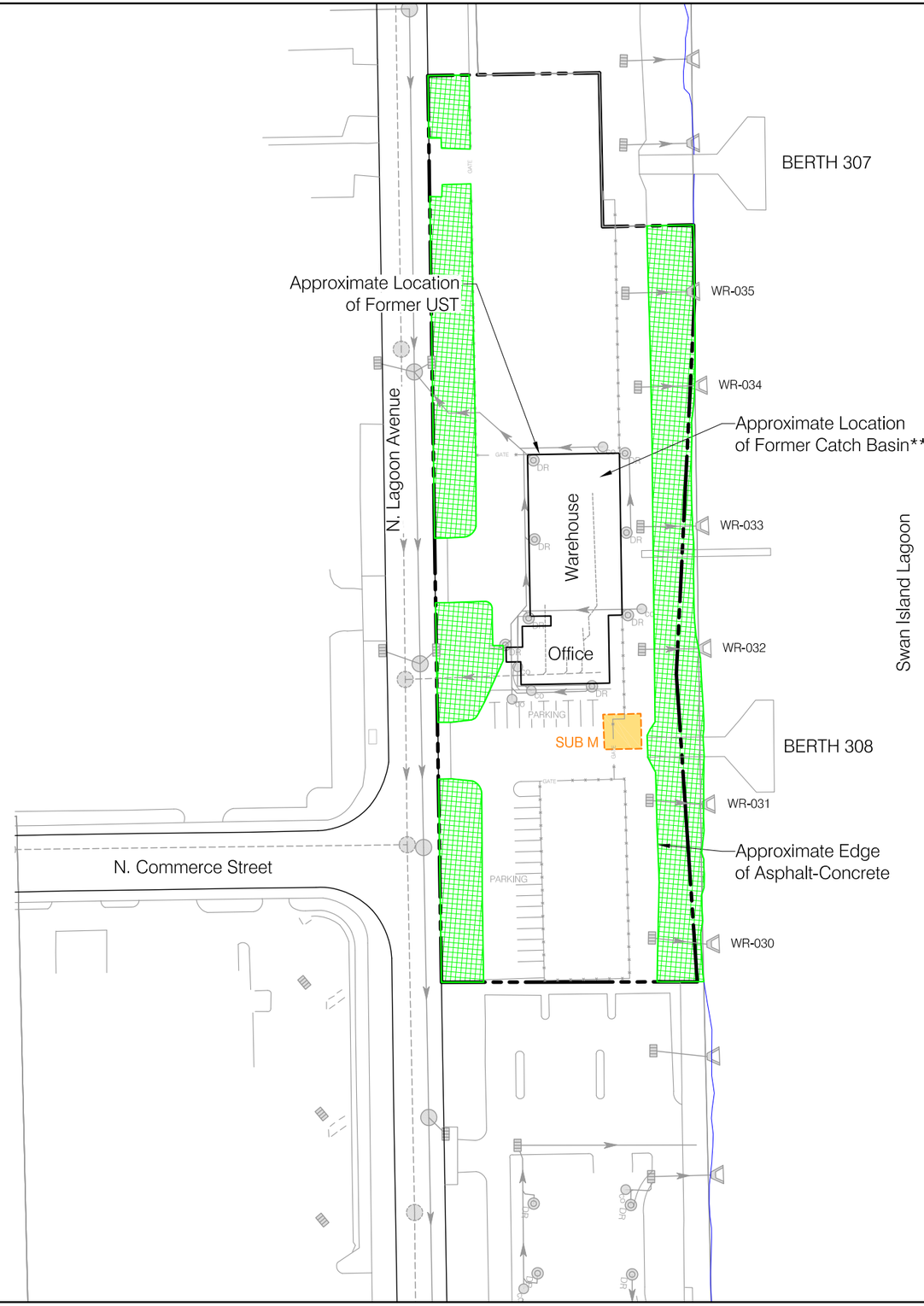
NOTE:
1. Prepared from AutoCAD base map received from the Port of Portland in June 2007.

Site Vicinity Map

OU3 Storm Water Sampling
Swan Island Upland Facility
Portland, Oregon

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Project Number	1115-08	Figure
July 2011		2



Legend:

- Operable Unit 3 Boundary
- WR-035 Inlet and Outfall Pipe and Number
- Storm Sewer Line and Flow Direction
- Sanitary Line and Flow Direction
- DR Roof Drain
- CO Cleanout
- Manhole
- Catch Basin
- SUB M Kaiser Shipyard Substation Location - 1942 Plan (Locations Approximate) - Soil samples collected at North, South, East, and West corners
- Curb with Landscaped and/or Vegetated Area

** Catch basin was originally connected to the sanitary sewer via an oil/water separator (OWS). The OWS was filled with concrete prior to 1990 and since then, the catch basin has served as a blind sump.

N

0 100 200

Scale in Feet

Facility Plan

OU3 Storm Water Sampling
Swan Island Upland Facility
Portland, Oregon

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Project Number	1115-08	Figure
July 2011		3

Attachment A

Standard Operating Procedure 2.12

STANDARD OPERATING PROCEDURE	SOP Number:	2.12
	Date:	July 28, 2009
GRAB WATER SAMPLING PROCEDURES	Revision Number:	0.01
	Page:	1 of 1

1. PURPOSE AND SCOPE

This Standard Operating Procedure (SOP) describes the methods used for obtaining grab-type water samples from storm drains, outfalls, flumes or surface waters for physical and/or chemical analysis. For a grab sample a discrete aliquot is collected representing a specific location at a given time. This SOP does not include collection of samples with an automated sampler. Various types of methods are used to collect grab water samples including peristaltic pumps, telescoping samplers, or directly filling laboratory-supplied sample containers. This procedure is applicable during all Ash Creek Associates (ACA) outfall water sampling activities.

2. EQUIPMENT AND MATERIALS

The following materials are necessary for this procedure:

- Telescoping swing sampler; and/or peristaltic pump and tubing.
- Laboratory-supplied sample containers
- Field documentation materials
- Decontamination materials
- Personal protective equipment (as required by Health and Safety Plan)

3. METHODOLOGY

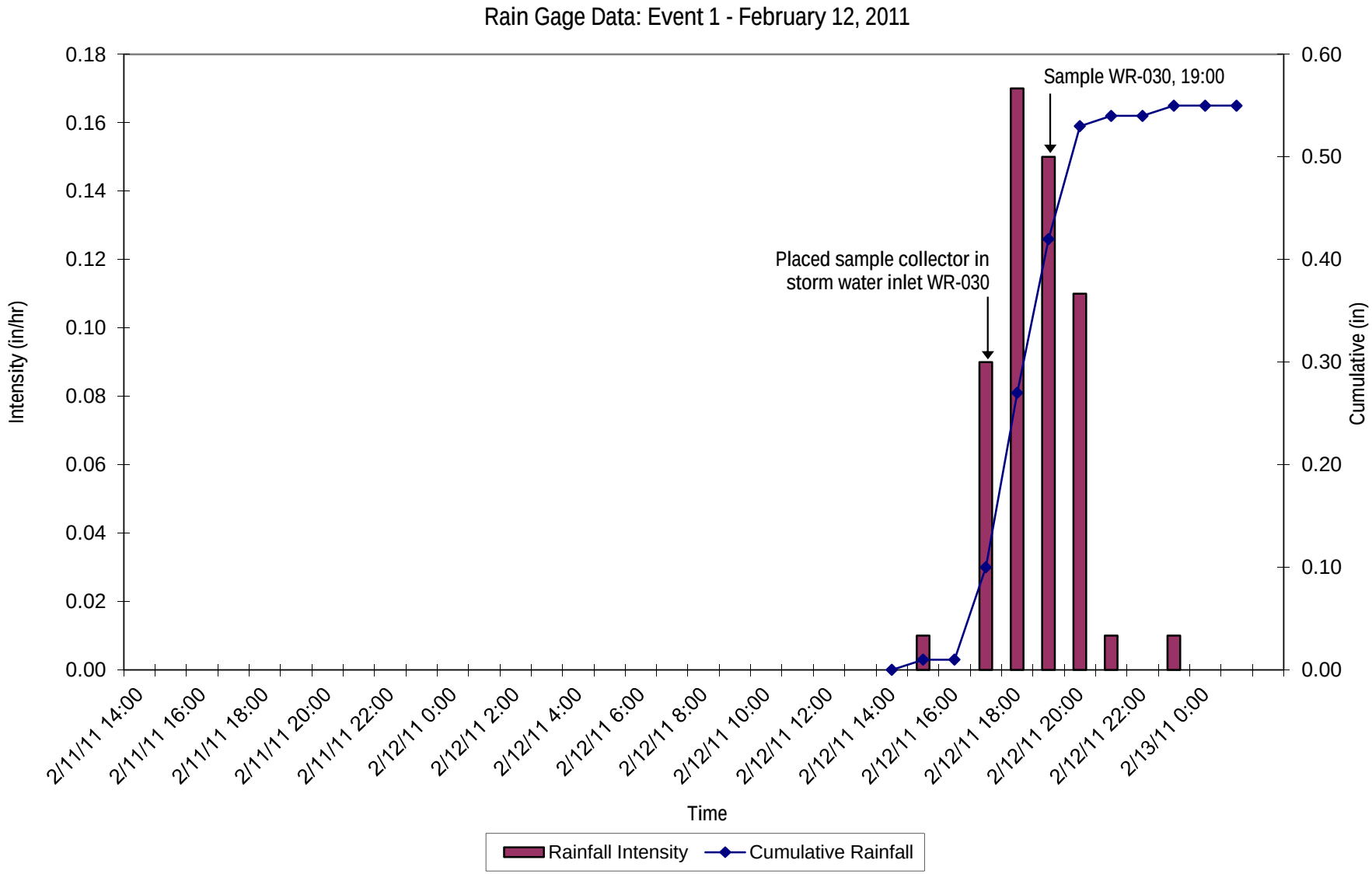
Project-specific requirements will generally dictate the preferred type of sampling equipment used at a particular site. The following parameters should be considered: accessibility of sampling point, sampling depth, and flow rate. Analytical testing requirements will indicate sample volume requirements that also will influence the selection of the appropriate type of sampling method. The project sampling plan should define the specific requirements for collection of outfall water samples at a particular site.

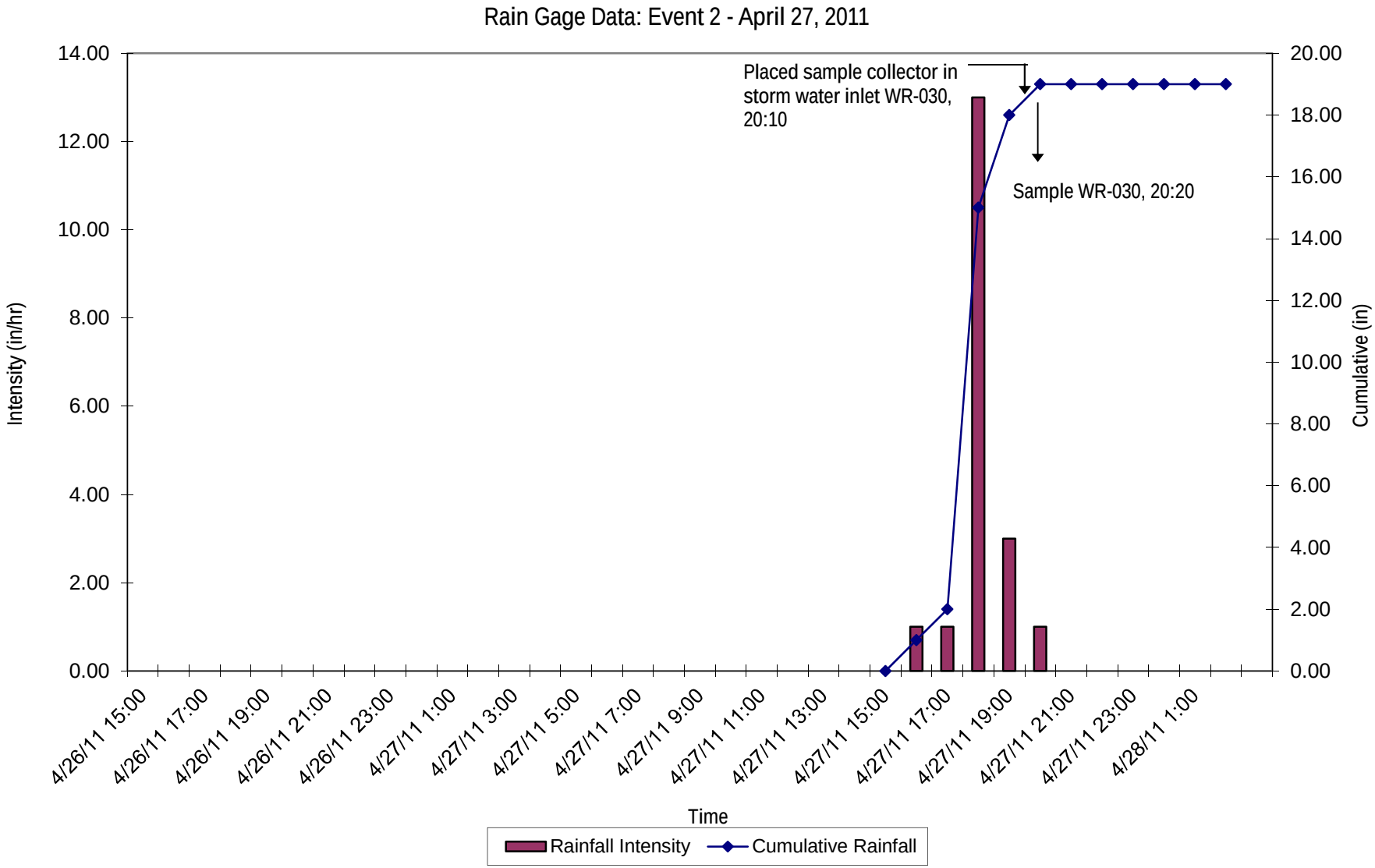
<u>Collection of Samples</u>

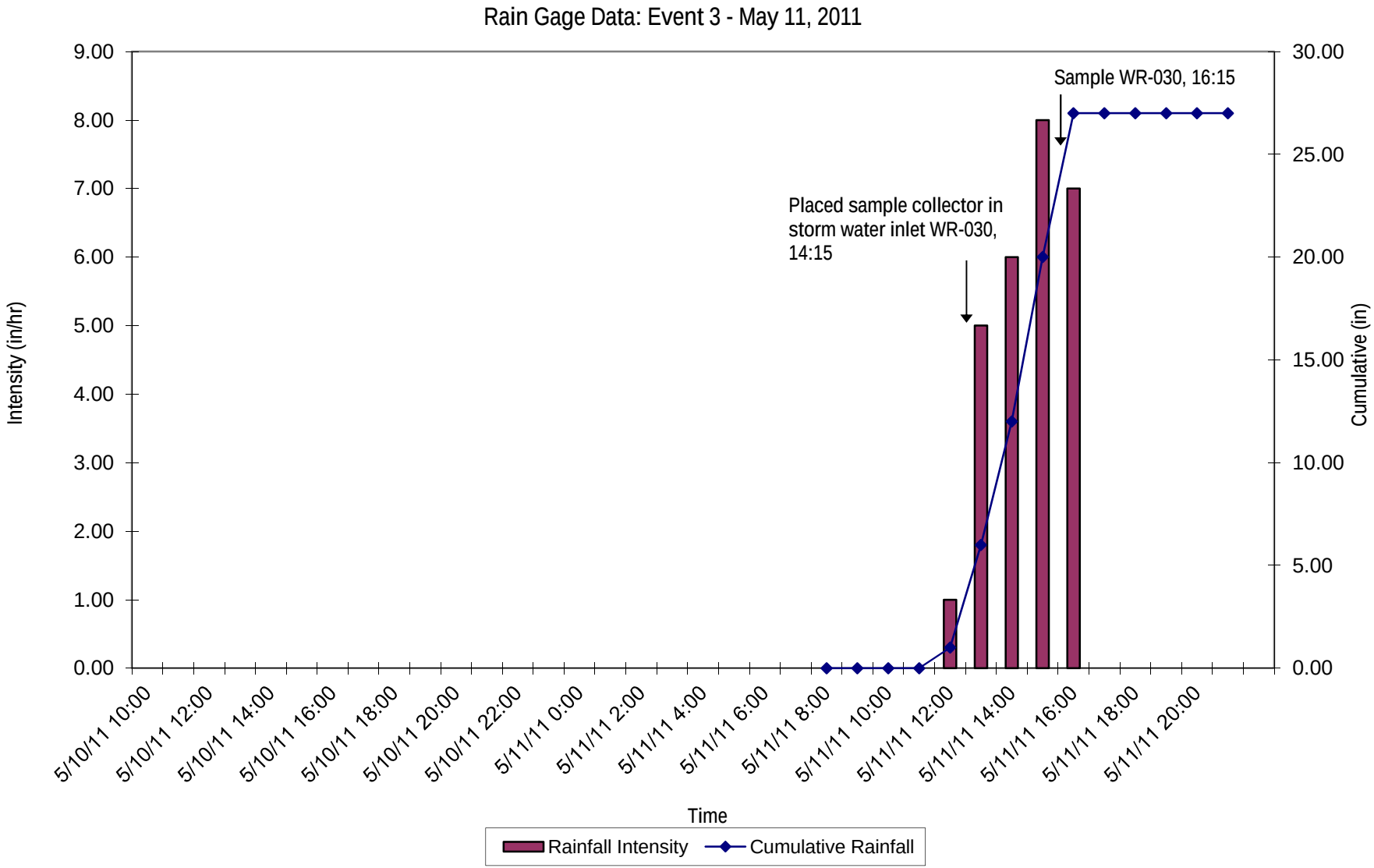
- Record weather conditions at the time of sampling and last known rain fall event(s). Record and describe site conditions upon arrival and during sampling..
- Collect samples using the “Clean Hands/Dirty Hands” sampling technique. Operations involving direct contact with the sample bottle, sample bottle lid, sample suction tubing, and the transfer of the sample from the sample collection device to the sample bottle are handled by “clean hands”. “Dirty hands” is responsible for preparation of the sampler (except the sample container itself), operation of any machinery, and for all activities that do not involve handling items that have direct contact with the sample.
- The water sample can be collected directly by dipping a new laboratory supplied container (i.e. polyethylene, Teflon, or glass) into the water (just beneath the water surface) or under the flow path and filling. The liquid is then transferred to a laboratory supplied sample container. Be careful not to touch the sides of the vault, manhole, or outfall pipe.
- A telescoping swing sampler can be used if an extension is necessary to access the sample point. Attach a new laboratory supplied container (i.e. polyethylene, Teflon, or glass) to the sampler. This transfer device is used to transfer liquid from the sampling point to a sample bottle. Avoid using metal transfer devices for trace-metal analysis or plastic devices for sampling trace organics.
- A peristaltic pump with disposable tubing can be used to collect a water sample from a manhole. The downhole tubing can be attached to a telescoping sampling pole to provide better control. Lower the tubing downstream of any standing water and take care to avoid stirring up the sediment.

Attachment B

Storm Water Hydrographs


Rain Gage Data: Event 1 - February 12, 2011
Intensity (in/hr)
Cumulative (in)
Time
Placed sample collector in storm water inlet WR-030
Sample WR-030, 19:00
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0.60
0.50
0.40
0.30
0.20
0.10
0.00
2/11/11 14:00
2/11/11 16:00
2/11/11 18:00
2/11/11 20:00
2/11/11 22:00
2/12/11 0:00
2/12/11 2:00
2/12/11 4:00
2/12/11 6:00
2/12/11 8:00
2/12/11 10:00
2/12/11 12:00
2/12/11 14:00
2/12/11 16:00
2/12/11 18:00
2/12/11 20:00
2/12/11 22:00
2/13/11 0:00
Rainfall Intensity
Cumulative Rainfall


Rain Gage Data: Event 2 - April 27, 2011
Placed sample collector in storm water inlet WR-030, 20:10
Sample WR-030, 20:20
Intensity (in/hr)
Cumulative (in)
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
20.00
18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
4/26/11 15:00
4/26/11 17:00
4/26/11 19:00
4/26/11 21:00
4/26/11 23:00
4/27/11 1:00
4/27/11 3:00
4/27/11 5:00
4/27/11 7:00
4/27/11 9:00
4/27/11 11:00
4/27/11 13:00
4/27/11 15:00
4/27/11 17:00
4/27/11 19:00
4/27/11 21:00
4/27/11 23:00
4/28/11 1:00
Time
Rainfall Intensity
Cumulative Rainfall


Rain Gage Data: Event 3 - May 11, 2011
Intensity (in/hr)
Cumulative (in)
Time
Placed sample collector in storm water inlet WR-030, 14:15
Sample WR-030, 16:15
Rainfall Intensity
Cumulative Rainfall
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
5/10/11 10:00
5/10/11 12:00
5/10/11 14:00
5/10/11 16:00
5/10/11 18:00
5/10/11 20:00
5/10/11 22:00
5/11/11 0:00
5/11/11 2:00
5/11/11 4:00
5/11/11 6:00
5/11/11 8:00
5/11/11 10:00
5/11/11 12:00
5/11/11 14:00
5/11/11 16:00
5/11/11 18:00
5/11/11 20:00

Attachment C

Analytical Laboratory Reports
(Contained on CD-ROM)

Attachment D

Catch Basin Inspection Report

BUREAU OF BUILDINGS

REPORT OF PLUMBING INSPECTION

Date 8-24-92

Address 5420 N Lagoon Dr Permit 124098

Owner Burlington Environmental

Contractor DeTemple Co.

Stories and Class of Building Comm.

Water Closets	Hot Water Tank	Conn. Cesspool
Shower	Auto Cl. Washer	Seepage Trench
Bathtub	Auto Dishwasher	Dry Wells
Basins	Service Sinks	Conn. Sewer
Kitchen Sink	Urinals	Conn. Storm
Disposal	Fountains	Sewer Cap
Laundry Tray	Floor Drain	Catch Basin
Heat Pump	Area Drain	Heat Exchanger
Water Service	Rain Drains	Solar Panel

Remarks 1 Fixture $31 Cap waste line from oil sep. to sw

Date of Cover Inspection _____ Date of Final Inspection _____

_____ Inspector _____ Inspector